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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/897,848	07/02/2001	Narayan L. Gehlot	Gehlot 22	1077
7590 05/17/2006				
HARNESS, DICKEY & PIERCE, P.L.C P.O. BOX 8910 RESTON, VA 20195			EXAMINER TRAN, DZUNG D	
			ART UNIT 2613	PAPER NUMBER

DATE MAILED: 05/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

A

**Office Action Summary**

Application No.

09/897,848

Applicant(s)

GEHLOT, NARAYAN L.

Examiner

Dzung D. Tran

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-11 and 28 is/are allowed.
- 6) ☒ Claim(s) 12, 14-27 and 29 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Specification*

1. As per our conversion date 05/11/2006, claims 1-11 are allowable, the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 15, 20-22 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Habel US patent no. 6,592,273.

Regarding claim 15, Habel discloses in figure 2, a communication system comprising:

an optical link 5 (equivalent to a channel);

a light source 6 (equivalent to a transmitter) for transmitting a data signal from data source (e.g., data is received by TDP 9) having a spectrum, the transmitter including:

Art Unit: 2613

an operating parameter carrier generator operable to provide an operating parameter carrier at a frequency ( $f_{ch}$ ) having a value in a null, associated with a data rate bit period, of the spectrum (figure 1, col. 3, lines 3-9); and

a summer 4 for summing the operating parameter carrier ( $f_{ch}$ ) with the data signal wherein the transmitter transmits the summed signal over an optical link 5 (equivalent to a channel); and

a detector 8 (equivalent to a receiver) for receiving the summed signal, the receiver operable to recover the operating parameter carrier ( $f_{ch}$ ), see figure 2.

Regarding claim 20, Habel discloses the communication system comprises at least one optical channel (e.g., an optical link 5 of figure 2) a summer 4 including an optocoupler (e.g., summer 4 is summing the optical signal).

Regarding claim 21, Habel discloses the communication system implements DWDM which is inherently to WDM (col. 2, lines 62-66).

Regarding claim 22, Habel discloses data signal is an NZR data signal (col. 3, line 4).

Regarding claim 25, Habel discloses in figure 1, the operating parameter carrier ( $f_{ch}$ ) is a sinusoid.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2613

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 12, 16, 17, 23, 27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Habel US patent no. 6,592,273 in view of Bruene US patent no. 4,302,844.

Regarding claims 12, 16, 23, 27 and 29, Habel discloses all the limitations except for the data spectrum of the data signal comprises a plurality of nulls, and at least another operating parameter carrier. Since Habel reference taught the technique of creates a null into the stream of data signal associated with a data rate bit period (figure 1, col. 3, lines 3-9; e.g., it must generate a null per each data bit rate). Therefore, if it is not inherently, it would be obvious to one of ordinary skill in the art that Habel apparatus can be inserted a plurality of carrier frequencies in the vicinity of plurality nulls for minimum cross-talk (col. 3, lines 5-6 of Habel). Furthermore, Bruene US patent no. 4,302,844 shown in figures 2a-2f, the data signal comprises a plurality of nulls having a plurality of carrier frequencies in the vicinity of plurality nulls. Therefore, at the time of the invention was made, it would have been obvious to include the teaching of Bruene in the system of Habel for minimum cross-talk, thus it is easier for monitoring the optical SNR and BER.

Regarding claim 17, Habel discloses in figure 1, the operating parameter carrier ( $f_{ch}$ ) is a sinusoid.

6. Claims 14, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Habel US patent no. 6,592,273 in view of Davarian US patent no. 4,675,880.

Regarding claim 14, Davarian further discloses a filter 40 for bandwidth limiting the summed signal (col. 8, line 4).

Regarding claim 18, Habel discloses all the limitations except for bandwidth limiting at least one operating parameter carrier. Davarian discloses the filters 43-46 for bandwidth limiting at least one operating parameter carrier (col. 8, lines 12-16). At the time of the invention was made, it would have been obvious for one of ordinary skill in the art to include the filter of Davarian in the system of Habel in order to stop the unwanted bandwidth to transmit over the optical system. Thus, it reduces the cross-talk between channel.

Regarding claim 19, Davarian further discloses a filter 40 for bandwidth limiting the summed signal (col. 8, line 4).

Regarding claims 24 and 26, the RZ to NRZ converter is well known in the art.

7. Claims 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Claims 1-11 and 28 are allowed.

***Response to Arguments***

9. Applicant's arguments with respect to claims 12-27 and 29 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dzung Tran whose telephone number is (571) 272-3025.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Jason Chan, can be reached on (571) 272-3022.

The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.



Dzung Tran

05/15/2006